



IBIS0038-103 (MSIBIS-0002US.C2)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: **Crooke, Griffey and Hofstadler**

Serial No.: **10/608,354**

Group Art Unit: **Not Yet Assigned**

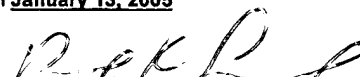
Filing Date: **June 27, 2003**

Examiner: **Not Yet Assigned**

For: **Mass Spectrometric Methods For Biomolecular Screening**

I certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to the Commissioner for Patents, PO Box 1450, Alexandria, VA, 22313-1450.

On January 13, 2005

  
Paul K. Legaard, Ph.D., Registration No. 38,534

**Mail Stop: Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§ 1.56 and in accordance with 37 C.F.R. §§ 1.97 and 1.98, information relating to the above-identified application is hereby disclosed, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 submitted herewith.

Inclusion of the information submitted herewith is not to be construed as an admission that the information is material as that term is defined in 37 C.F.R. § 1.56(b).

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

**This Information Disclosure Statement is being filed:**

- ☐ within three months of the filing date of the patent application.
- ☐ within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 of the international application.
- ☒ **before** the mailing date of a first Office Action on the merits.
- ☐ **before** the mailing date of a first Office Action on the merits after the filing of a Request for Continued Examination under § 1.114.
- ☐ **after** the mailing date of a first Office Action on the merits or after the filing of a Request for Continued Examination under § 1.114, but before the mailing date of a Final Office Action under 37 C.F.R. § 1.116 or a Notice of Allowance under 37 C.F.R. § 1.311, and accordingly is accompanied by:
  - ☐ the Statement under 37 C.F.R. § 1.97(e) (see "Statement" below);

**or**

- ☐ the Fee of \$180.00 set forth in 37 C.F.R. § 1.17(p); or
- ☐ No fee is owed by the applicant(s).
- ☐ In accordance with 37 C.F.R. § 1.129(a), this Information Disclosure Statement is being filed in connection with the ☐ first or ☐ second After Final Submission, and accordingly is accompanied by the Statement under 37 C.F.R. § 1.97(e) (see "Statement" below) and the fee of \$180.00 as set forth in 37 C.F.R. § 1.17(p), is attached.
- ☐ **after** the mailing date of a Final Office Action under 37 C.F.R. § 1.116 or a Notice of Allowance under 37 C.F.R. § 1.311, but before, or simultaneously with, the payment of the Issue Fee, and accordingly is accompanied by the Statement under 37 C.F.R. § 1.97(e), a Petition requesting consideration of the Information Disclosure Statement and the Petition Fee of \$130.00 set forth in 37 C.F.R. § 1.17(i)(1) (see "Statement," "Petition," and "Fees" below).
- ☒ Copies of references **AG** and **AH** listed on the attached PTO Form SB/08B, formerly known as PTO Form 1449 are enclosed.

**EXCEPT THAT:**

- ☒ In view of the voluminous nature of references **EF-EQ**, and the likelihood that these reference are available to the Examiner, copies are not enclosed herewith.
- ☒ In accordance with 37 C.F.R. § 1.98(d), copies of the remaining references listed on the attached PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) 09/884,317, 09/260,310, and 09/076,206 for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application.

- ☒ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

**Statement under 37 C.F.R. § 1.97(e)**

- ☐ The undersigned attorney hereby states that each item information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.

**Statement under 37 C.F.R. § 1.704(d)**

- ☐ The undersigned attorney hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and the communication was not received by any individual designated in § 1.56(c) more than 30 days prior to the filing of the Information Disclosure Statement.

**Fees**

- ☒ No Fee is owed by the applicant(s).
- ☐ The Information Disclosure Statement Fee of \$180.00 under 37 C.F.R. § 1.17(p) is enclosed herewith.
- ☐ The Petition Fee of \$130.00 under 37 C.F.R. § 1.17(i)(1) is enclosed herewith.

**Method of Payment of Fees**

- ☐ Attached is a check in the amount of \$\_\_\_\_\_. This form is submitted in duplicate.
- ☐ Charge Deposit Account No. 50-1275 in the amount of \$180.00. This form is submitted in duplicate.
- ☒ Please charge any deficiency or credit any overpayment to Deposit Account 50-1275.
- ☒ No fee or Statement is required under 37 C.F.R. § 1.97(b).

Respectfully submitted,



**Paul K. Legaard, Ph.D.**  
Registration No. 38,534

Dated: January 13, 2005

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Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 12

**Complete if Known**

Application Number	10/608,354
Filing Date	June 27, 2003
First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
Examiner Name	To Be Determined
Attorney Docket Number	IBIS0038-103 (MSIBIS-0002US.C2)

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	AI	Dunayevsky, Y.M., et al., "Simultaneous measurement of nineteen binding constants of peptides to vancomycin using affinity capillary electrophoresis-mass spectrometry," J. Med. Chem., 1998, 41, 1201-1204.	
	AJ	Griffey, R.H., et al., "Determinants of aninoglycoside-binding specificity for rRNA by using mass spectrometry," Proc. Natl. Acad. Sci. USA, 1999, 96, 10129-10133.	
	AK	Kempen, E.C., et al., "A method for the determination of binding constants by electrospray ionization mass spectrometry," Anal. Chem., 2000, 72, 5411-5416.	
	AL	Loo, J.A., "Studying noncovalent protein complexes by electrospray ionization mass spectrometry," Mass Spectrometry Reviews, 1997, 16, 1-23.	
	AM	Cheng, X. et al., "Electrospray Ionization with High Performance Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for the Study of Noncovalent Biomolecular Complexes," Techniques in Protein Chem. VII, 1996, 13-22.	
	AN	Przybylski, M. et al., "Mass spectrometric approaches to molecular characterization of protein-nucleic acid interactions," Toxicology Letts., 1995, 82/83, 567-575.	
	AO	Sannes-Lowery, K.A. et al., "HIV-1 Tat Peptide Binding to TAR RNA by Electrospray Ionization Mass Spectrometry," Anal. Chem., 1997, 69, 5130-5135.	
	AP	Koster, H. et al., "A Strategy for rapid and efficient DNA sequencing by mass spectrometry," Nature Biotechnology, 1996, 14, 1123-1128.	
	AQ	Amster, "Fourier Transform Mass Spectrometry", J. Mass Spectrom., 1996, 31, 1325-1337.	
	AR	Baca et al., "Direct Observation of a Ternary Complex between the Dimeric Enzyme HIV-1 Protease and a Substrate-Based Inhibitor", J. Am. Chem. Soc., 1992, 114, 3992-3993.	
	AS	Baczynskyj et al., "Application of Thermally Assisted Electrospray Ionization Mass Spectrometry for Detection of Noncovalent Complexes of Bovine Serum Albumin with Growth Hormone Releasing Factor and Other Biologically Active Peptides", Rapid Commun. Mass Spectrom., 1994, 8, 280-286.	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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	AT	Bayer et al., "Analysis of Double-Stranded Oligonucleotides by Electrospray Mass Spectrometry", Anal. Chem., 1994, 66, 3858-3863.	
	AU	Berson et al., "General Principles of Radioimmunoassay", Clin. Chim. Acta, 1968, 22, 51-60.	
	AV	Bruce et al., "Bio-Affinity Characterization Mass Spectrometry", Rapid Commun. Mass Spectrom., 1995, 9, 644-650.	
	AW	Bruins et al., "Ion Spray Interface for Combined Liquid Chromatography/Atmospheric Pressure Ionization Mass Spectrometry", Anal. Chem., 1987, 59, 2642-2646.	
	AX	Busman et al., "Observation of Large Multimers in the Electrospray Ionization Mass Spectrometry of Peptides", Rapid Commun. Mass Spectrom., 1994, 8, 211-216.	
	AY	Cai et al., "Capillary electrohoresis--mass spectrometry", J. Chromatogr., 1995, 703, 667-692.	
	AZ	Cheng et al., "Using Electrospray Ionization FTICR Mass Spectrometry to Study Competitive Binding of Inhibitors to Carbonic Anhydrase", J. Am. Chem. Soc., 1995, 117, 8859-8860.	
	BA	Chu et al., "Affinity Capillary Electrophoresis", Acc. Chem. Res., 1995, 28, 461-468.	
	BB	Chu et al., "Using Affinity Capillary Electrophoresis to Identify the Peptide in a Peptide Library that Binds Most Tightly to Vancomycin", J. Org. Chem., 1993, 58, 648-652.	
	BC	Chu et al., "Affinity Capillary Electrophoresis--Mass Spectrometry for Screening Combinatorial Libraries", J. Am. Chem. Soc., 1996, 118, 7827-7835.	
	BD	Cohen et al., "Probing the solution structure of the DNA-binding protein Max by a combination of proteolysis and mass spectrometry", Protein Sci., 1995, 4, 1088-1099.	

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Considered

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Sheet 4 of 12

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First Named Inventor	Stanley T. Crooke
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Examiner Name	To Be Determined
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	BE	Doctycz et al., "Accumulation and Storage of Ionized Duplex DNA Molecules in a Quadrupole Ion Trap", Anal. Chem., 1994, 66, 3416-3422.	
	BF	Dunayevskly et al., "Mass Spectrometric Identification of Ligands Selected from Combinatorial Libraries Using Gel Filtration", Rapid Commun. Mass Spectrom., 1997, 11, 1178-1184.	
	BG	Ecker et al., "Combinatorial Drug Discovery: Which Methods Will Produce the Greatest Value", Biotech., 1995, 13, 351-360.	
	BH	Erickson et al., "Macromolecular X-Ray Crystallography and NMR as Tools for Structure-based Drug Design", Ann. Rep. Med. Chem., 1992, vol. 27, Ch. 29, 271-289.	
	BI	Feng et al., "Analysis of Antibodies and Other Large Glycoproteins in the Mass Range of 150 000-200 000 Da by Electrospray Ionization Mass Spectrometry", Anal. Chem., 1992, 64, 2090-2095.	
	BJ	Gale et al., "Observation of Duplex DNA-Drug Noncovalent Complexes by Electrospray Ionization Mass Spectrometry", J. Am. Chem. Soc., 1994, 116, 6027-6028.	
	BK	Ganem et al., "Detecting Noncovalent Complexes of Biological Macromolecules: New Applications of Ion-Spray Mass Spectrometry", ChemTracts-Org. Chem., 1993, 6, 1-22.	
	BL	Ganem et al., "Detection of Oligonucleotide Duplex Forms by Ion-Spray Mass Spectrometry", Tetra. Lett., 1993, 34(9), 1445-1448.	
	BM	Gao et al., "Screening Derivatized Peptide Libraries for Tight Binding Inhibitors to Carbonic Anhydrase II by Electrospray Ionization-Mass Spectrometry", J. Med. Chem., 1996, 39, 1949-1955.	
	BN	Glover et al., "Sequencing of Oligonucleotides Using High Performance Liquid Chromatography and Electrospray Mass Spectrometry", Rapid Commun. Mass Spectrom., 1995, 9, 897-901.	
	BO	Goodlett et al., "Direct Observation of a DNA Quadruplex by Electrospray Ionization Mass Spectrometry", Biol. Mass Spectrom., 1993, 22, 181-183.	

Examiner Signature		Date Considered	
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Sheet 5 of 12

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	BP	Greig et al., "Measurement of Macromolecular Binding Using Electrospray Mass Spectrometry. Determination of Dissociation Constants for Oligonucleotide--Serum Albumin Complexes", J. Am. Chem. Soc., 1995, 117, 10765-10766.	
	BQ	Henion et al., "Mass Spectrometric Investigations of Drug-Receptor Interactions", Ther. Drug Monitoring, 1993, 15(6), 563-569.	
	BR	Hillenkamp et al., "Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry of Bipolymers", Anal. Chem., 1991, 63(24), 1193A-1202A.	
	BS	Hu et al., "Determining Calcium-binding Stoichiometry and Cooperativity of Parvalbumin and Calmodulin by Mass Spectrometry", J. Mass Spectrom., 1995, 30, 1076-1079.	
	BT	Huang et al., "Packed-Capillary Liquid Chromatography/Ion-Spray Tandem Mass Spectrometry Determination of Biomolecules", Anal. Chem., 1991, 63, 732-739.	
	BU	Huang et al., "LC/MS and LC/MS/MS Determination of Protein Tryptic Digests", J. Am. Soc. Mass Spectrom., 1990, 1(2), 158-165.	
	BV	Jefson, "Applications of NMR Spectroscopy to Protein Structure Determination", Ann. Rep. Med. Chem., 1998, vol. 23, Ch. 28, 275-283.	
	BW	Jensen et al., "Mass Spectrometric Characterization of UV-Crosslinked Protein-Nucleic Acid Complexes", 42nd ASMS Conf. On Mass Spectrom. and Allied Topics, 1994, 923.	
	BX	Jensen et al., "Direct Observation of UV-crosslinked Protein-Nucleic Acid Complexes by Matrix-assisted Laser Desorption Ionization Mass Spectrometry", Rapid Commun. Mass Spectrom., 1993, 7, 496-501.	
	BY	Jonsson et al., "Real-Time Biospecific Interaction Analysis Using Surface Plasmon Resonance and a Sensor Chip Technology", Biotech., 1991, 11(5), 620-627.	
	BZ	Karlsson et al., "Kinetic analysis of monoclonal antibody-antigen interactions with a new biosensor based analytical system", J. Immunol. Methods, 1991, 145, 229-240.	

Examiner  
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Sheet 6 of 12

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First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
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	CA	Kassel et al., "Direct Coupling of an Automated 2-Dimensional Microcolumn Affinity Chromatography-Capillary HPLC System with Mass Spectrometry for Biomolecular Analysis", in Techniques in Protein Chemistry, J.Crabb (ed.), Academic Press, San Diego, 1995, Ch. VI, 39-46.	
	CB	Knight et al., "Electrospray Ionization Mass Spectrometry as a Mechanistic Tool: Mass of Human Leucocyte Elastase and a .beta.-Lactam-Derived E-1 Complex", Biochem., 1993, 32, 2031-2035.	
	CC	Lane et al., "SPARC Is a Source of Copper-binding Peptides that Stimulate Angiogenesis", J. Cell Biol., 1994, 125(4), 929-943.	
	CD	Li et al., "Mass Spectrometric Studies on Noncovalent Dimers of Leucine Zipper Peptides", J. Am. Chem. Soc., 1993, 115, 8409-8413.	
	CE	Light-Wahl et al., "Observation of a Small Oligonucleotide Duplex by Electrospray Ionization Mass Spectrometry", J. Am. Chem. Soc., 1993, 115, 803-804.	
	CF	Light-Wahl et al., "Observation of the Noncovalent Quaternary Associations of Proteins by Electrospray Ionization Mass Spectrometry", J. Am. Chem. Soc., 1994, 116, 5271-5278.	
	CG	Light-Wahl et al., "Collisionally Activated Dissociation and Tandem Mass Spectrometry of Intact Hemoglobin .beta.-Chain Variant Proteins with Electrospray Ionization", Biol. Mass Spectrom., 1993, 22, 112-120.	
	CH	Lim et al., "Recognition of Cell-wall Peptide Ligands by Vancomycin Group Antibiotics: Studies Using Ion Spray Mass Spectrometry", J. Mass Spectrom., 1995, 30, 708-714.	
	CI	Little et al., "Rapid Sequencing of Oligonucleotides by High-Resolution Mass Spectrometry", J. Am. Chem. Soc., 1994, 116, 4893-4897.	
	CJ	Little et al., "Sequencing 50-mer DNAs Using Electrospray Tandem Mass Spectrometry and Complementary Fragmentation Methods", J. Am. Chem. Soc., 1995, 117, 6783-6784.	
	CK	Little et al., "Infrared Multiphoton Dissociation of Large Multiply Charged Ions for Biomolecule Sequencing", Anal. Chem., 1994, 66, 2809-2815.	

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	CL	Little et al., "Verification of 50-to 100-mer DNA and RNA sequences with high-resolution mass spectrometry", Proc. Natl. Acad. Sci. USA, 1995, 92, 2318-2322.	
	CM	Loo, "Bioanalytical Mass Spectrometry: Many Flavors to Choose", Bioconjugate Chem., 1995, 6, 644-665.	
	CN	Loo, "Observation of Large Subunit Protein Complexes by Electrospray Ionization Mass Spectrometry", J. Mass Spectrom., 1995, 30, 180-183.	
	CO	Loo et al., "Use of Electrospray Ionization Mass Spectrometry to Probe Antisense Peptide Interactions", Biol. Mass Spectrom., 1994, 23, 6-12.	
	CP	Loo et al., "Interactions of Angiotensin Peptides and Zinc Metal Ions Probed by Electrospray Ionization Mass Spectrometry", J. Am. Soc. Mass Spectrom., 1994, 5(11), 959-965.	
	CQ	Marshall et al., "Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: The Teenage Years", Anal. Chem., 1991, 63(4), A215-A229.	
	CR	McLuckey et al., "Tandem Mass Spectrometry of Small, Multiply Charged Oligonucleotides", J. Am. Soc. Mass Spectrom., 1992, 3(1), 60-70.	
	CS	McLuckey et al., "Decompositions of Multiply Charged Oligonucleotide Anions", J. Am. Chem. Soc., 1993, 115, 12085-12095.	
	CT	Nelson et al., "Mass Determination of Human Immunoglobulin IgM Using Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry", Rapid Commun. Mass Spectrom., 1994, 8, 627-631.	
	CU	Ni et al., "Interpretation of Oligonucleotide Mass Spectra for Determination of Sequence Using Electrospray Ionization and Tandem Mass Spectrometry", Anal. Chem., 1996, 68, 1989-1999.	
	CV	Nordhoff et al., "Direct Mass Spectrometric Sequencing of Low-picomole Amounts of Oligodeoxynucleotides with up to 21 Bases by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry", J. Mass Spectrom., 1995, 30, 99-112.	

Examiner Signature		Date Considered	
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 8 of 12

**Complete if Known**

Application Number	10/608,354
Filing Date	June 27, 2003
First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
Examiner Name	To Be Determined
Attorney Docket Number	IBIS0038-103 (MSIBIS-0002US.C2)

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CW	Pieles et al., "Matrix-assisted laser desorption ionization time-of-flight mass spectrometry: a powerful tool for the mass and sequence analysis of natural and modified oligonucleotides", Nucl. Acid Res., 1993, 21(14), 3191-3196.	
	CX	Rossomando et al., "Identification of Tyr-185 as the site of tyrosine autophosphorylation of recombinant mitogen-activated protein kinase p42.sup.mapk ", Proc. Natl. Acad. Sci USA, 1992, 89, 5779-5783.	
	CY	Shaler et al., "Analysis of Enzymatic DNA Sequencing Reactions by Matrix-assisted Laser Desorption/Ionization Time-of-flight Mass Spectrometry", Rapid Commun. Mass Spectrom., 1995, 9, 942-947.	
	CZ	Smith et al., "The Observation of Non-covalent Interactions in Solution by Electrospray Ionization Mass Spectrometry: Promise, Pitfalls and Prognosis", J. Biol. Mass Spectrom., 1993, 22, 493-501.	
	DA	Smith et al., "New Developments in Biochemical Mass Spectrometry: Electrospray Ionization", Anal. Chem., 1990, 62, 882-899.	
	DB	Sternberg et al., "Display of peptides and proteins on the surface of bacteriophage .gamma.", Proc. Natl. Acad. Sci. USA, 1995, 92, 1609-1613.	
	DC	Udenfriend et al., "Scintillation Proximity Assay: A Sensitive and Continuous Isotopic Method for Monitoring Ligand/Receptor and Antigen/Antibody Interactions", Anal. Biochem., 1987, 161, 494-500.	
	DD	Winger et al., "High-Resolution Accurate Mass Measurements of Biomolecules Using a New Electrospray Ionization Ion Cyclotron Resonance Mass Spectrometer", J. Am. Soc. Mass Spectrom., 1993, 4(7), 566-577.	
	DE	Witkowska et al., "Mass Spectrometric Analysis of a Native Zinc-Finger Structure: The Glucocorticoid Receptor DNA Binding Domain", J. Am. Chem. Soc., 1995, 117(12), 3319-3324.	
	DF	Cheng et al., "Electrospray Ionization with High Performance Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for the Study of Noncovalent Biomolecular Complexes", in Techniques in Protein Chemistry, 1996, vol. 7, 13-22.	

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Sheet 9 of 12

**Complete if Known**

Application Number	10/608,354
Filing Date	June 27, 2003
First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
Examiner Name	To Be Determined
Attorney Docket Number	IBIS0038-103 (MSIBIS-0002US.C2)

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	DG	Egli, Martin et al., "Crystal structure of an Okazaki fragment at 2-A resolution," Proc. Natl. Acad. Sci. vol. 89. pp. 534-538. (Jan. 1992).	
	DH	Anderegg et al., "Mass Spectrometric Characterization of a Protein--Ligand Interaction", J. Am. Chem. Soc., 1995, 117, 1374-1377.	
	DI	Berendsen, "A glimpse of the Holy Grail?" Science (1998) 282:642-643.	
	DJ	Biemann, "Mass Spectrometry of Peptides and Proteins", Ann. Rev. Biochem., 1992, 61, 977-1010.	
	DK	Bowers et al., "Mass Spectrometry: Recent Advances and Future Directions", J. Phys. Chem., 1996, 100, 12897-12910.	
	DL	Burlingame et al., "Mass Spectrometry", J. Anal. Chem., 1998, 70, 647R-716R.	
	DM	Bryan, "Mechanisms of Action of Aminoglycoside Antibiotics", in New Dimensions in Antimicrobial Therapy, Root, R.K. et al. (eds.), Churchill Livingstone, New York, 1984, vol. 1, Ch. 2, 17-36.	
	DN	Cheng et al., "Direct measurement of oligonucleotide binding stoichiometry of gene V protein by mass spectrometry", Proc. Natl. Acad. Sci USA, 1996, 93, 7022-7027.	
	DO	Crain et al., "Applications of mass spectrometry to the characterization of oligonucleotides and nucleic acids", Curr. Opin. Biotechnol., 1998, 9, 25-34.	
	DP	De Stasio et al., "Mutations in 16S ribosomal RNA disrupt antibiotic--RNA interactions", EMBO J., 1989, 8, 1213-1216.	

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Sheet 10 of 12

**Complete if Known**

Application Number	10/608,354
Filing Date	June 27, 2003
First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
Examiner Name	To Be Determined
Attorney Docket Number	IBIS0038-103 (MSIBIS-0002US.C2)

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	DQ	Fourmy et al., "Structure of the A Site of Escherichia coli 16S Ribosomal RNA Complexed with an Aminoglycoside Antibiotic", Science, 1996, 2/4, 1367-1371.	
	DR	Fourmy et al., "Paromomycin Binding Induces a Local Conformational Change in the A-site of 16 S rRNA", J. Mol. Biol., 1998, 277, 333-345.	
	DS	Gale et al., "Characterization of Noncovalent Complexes Formed between Minor Groove Binding Molecules and Duplex DNA by Electrospray Ionization--Mass Spectrometry", J. Am. Soc. Mass Spectrometry, 1995, 6, 1154-1164.	
	DT	Ganguly et al., "Studies of the Ras-GDP and Ras-GTP Noncovalent Complexes by Electrospray Mass Spectrometry", Tetrahedron, 1993, 49(36), 7985-7996.	
	DU	Griffey et al., "Detection of base pair mismatches in duplex DNA and RNA oligonucleotides using electrospray mass spectrometry", Proc. SPIE-Int. Soc. Opt. Eng., 1997, 2985, 82-86.	
	DV	Jorgensen et al., "Direct Determination of Solution Binding Constants for Noncovalent Complexes between Bacterial Cell Wall Peptide Analogues and Vancomycin Group Antibiotics by Electrospray Ionization Mass Spectrometry", Anal. Chem., 1998, 70, 4427-4432.	
	DW	Loo, "Study Noncovalent Protein Complexes by Electrospray Ionization Mass Spectrometry", Mass Spectrometry Reviews, 1997, 16, 1-23.	
	DX	Marshall et al., "Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: A Primer", Mass Spectrom. Rev., 1998, 17, 1-35.	
	DY	Miyaguchi et al., "An antibiotic motif of an RNA fragment derived from the A-site-related region of Escherichia coli 16A rRNA", Nucl. Acids Res., 1996, 24(19), 3700-3706.	
	DZ	Recht et al., "RNA Sequence Determinants for Aminoglycoside Binding to an A-site rRNA Model Oligonucleotide", J. Mol. Biol., 1996, 262, 421-436.	

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Application Number	10/608,354
Filing Date	June 27, 2003
First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
Examiner Name	To Be Determined
Attorney Docket Number	IBIS0038-103 (MSIBIS-0002US.C2)

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	EA	Smith et al., "New mass spectrometric methods for the study of noncovalent associations of biopolymers", Chem. Soc. Rev., 1997, 26, 191-202.	
	EB	Wang et al., "Specificity of Aminoglycoside Binding to RNA Constructs Derived from the 16S rRNA Decoding Region and the HIV-RRE Activator Region", Biochem., 1997, 36, 768-779.	
	EC	Wincott et al., "Synthesis, deprotection, analysis and purification of RNA and ribozymes", Nucl. Acids Res., 1995, 23(14), 2677-2684.	
	ED	Wong et al., "Specificity of aminoglycoside antibiotics for the A-site of the decoding region of ribosomal RNA", Chem. Biol., 1998, 5(7), 397-406.	
	EE	Fitzgerald et al., "Probing the oligomeric structure of an enzyme by electrospray ionization time-of-flight mass spectrometry", Proc. Natl. Acad. Sci. USA, 1996, 93, 6851-6856.	
*	EF	Ens et al., (eds.), <i>New Methods for the Study of Biomolecular Complexes</i> , (Proceedings of the NATO Advanced Research Workshop held in Alberta, Canada on June 16-20, 1996) Vol. 510 (1998), Kluwer, Dordrecht, Neth., 1-354.	
*	EG	Adams et al., in <i>Automated DNA Sequencing and Analysis</i> , Academic Press, San Diego (1994).	
*	EH	Brown, in <i>DNA Sequencing</i> , IRL Oxford University Press, Oxford (1994).	
*	EI	Chard, in <i>An Introduction to Radioimmunoassay and Related Techniques</i> , Elsevier Press, Amsterdam/New York (1982).	
*	EJ	Cole, in <i>Electrospray Ionization Mass Spectrometry: Fundamentals, Instrumentation</i> , Wiley New York (1997).	

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Sheet 12 of 12

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Application Number	10/608,354
Filing Date	June 27, 2003
First Named Inventor	Stanley T. Crooke
Art Unit	To Be Determined
Examiner Name	To Be Determined
Attorney Docket Number	IBIS0038-103 (MSIBIS-0002US.C2)

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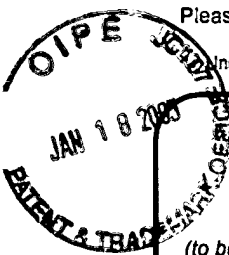
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*	EK	Copeland, in <i>Methods of Protein Analysis: A Practical Guide to Laboratory Protocols</i> , Chapman and Hall, New York (1994)	
*	EL	Creighton, in <i>Protein Folding</i> W.H. Freeman and Co. (1992).	
*	EM	Findlay et al., in <i>Protein Sequencing: A Practical Approach</i> , IRL Press, Oxford (1989).	
*	EN	Kemeny et al., in <i>ELISA and Other Solid Phase Immunoassays: Theoretical and Practical Aspects</i> , Wiley, New York (1988).	
*	EO	Loo et al., in <i>Proc. 43<sup>rd</sup> ASMS Conf. On Mass Spectrom. and Allied Topics</i> (1995).	
*	EP	Smith, in <i>Protein Sequencing Protocols</i> , Humana Press, Totowa, NY (1997).	
*	EQ	Snyder, in <i>Biochemical and Biotechnological Applications of Electrospray Ionization Mas.</i> , American Chemical Society, Washington, D.C. (1996).	

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## TRANSMITTAL FORM

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<b>Application Number</b>	10/608,354		
	<b>Filing Date</b>	June 27, 2003	
	<b>First Named Inventor</b>	Stanley T. Crooke	
	<b>Group Art Unit</b>	To Be Determined	
	<b>Examiner Name</b>	To Be Determined	
<b>Total Number of Pages in This Submission</b>		<b>Attorney Docket Number</b>	IBIS0038-103 (MSIBIS-0002US.C2)

### ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment / Response  <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input checked="" type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/ Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application)  <input type="checkbox"/> Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):  <b>Form PTO/SB/08a and Form PTO/SB/08b (11 pp.); (121) References Cites, (2) References enclosed.</b>
<b>Remarks</b>		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

<b>Firm or Individual name</b>	Paul K. Legaard, Ph.D., Registration No. 38,534		
<b>Signature</b>			
<b>Date</b>	January 13, 2005		

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